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Docket No.: 0171-1270PUS1  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Tomohisa YAMADA et al.

Application No.: 10/577,333

Confirmation No.: N/A

Filed: April 28, 2006

Art Unit: Not Yet Assigned

For: CHARGE TRANSPORTING COMPOUND,  
CHARGE TRANSPORTING MATERIAL,  
CHARGE TRANSPORTING VARNISH,  
CHARGE TRANSPORTING THIN FILM, AND  
ORGANIC ELECTROLUMINESCENT  
ELEMENT

Examiner: Not Yet Assigned

**LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Subsequent to the filing of the above-identified application on April 28, 2006, attached hereto is an English Translation of the International Preliminary Report on Patentability issued by the International Bureau on behalf of the International Searching Authority. Please make this document of record for the above-identified application.

Application No.: 10/577,333

Docket No.: 0171-1270PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or to credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Dated: September 26, 2006

Respectfully submitted,

By 

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Attachments

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

KOJIMA, Takashi  
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JAPON



|  |   |
|--|---|
| Date of mailing ( <i>day/month/year</i> )<br>03 August 2006 (03.08.2006) |   |
| Applicant's or agent's file reference<br>FAP-4026                        | IMPORTANT NOTIFICATION  |
| International application No.<br>PCT/JP2004/016094                       | International filing date ( <i>day/month/year</i> )<br>29 October 2004 (29.10.2004) |
| Applicant<br>NISSAN CHEMICAL INDUSTRIES, LTD. et al                      |   |

## 1. Transmittal of the translation to the applicant.

☐

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).

☒

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

## 2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

EP, KR

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

## 3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

|   |   |
|---|---|
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland | Authorized officer<br><br>Masashi Honda |
| Facsimile No. +41 22 338 82 70  | Facsimile No. +41 22 338 82 70          |

**TRANSLATION****PATENT COOPERATION TREATY****PCT****INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|   |   |   |
|---|---|---|
| Applicant's or agent's file reference<br><b>FAP-4026</b>  | <b>FOR FURTHER ACTION</b>                                       | See Form PCT/IPEA/416                               |
| International application No.<br><b>PCT/JP2004/016094</b>   | International filing date (day/month/year)<br><b>29.10.2004</b> | Priority date (day/month/year)<br><b>30.10.2003</b> |
| International Patent Classification (IPC) or national classification and IPC<br><b>C08G85/00 , 61/00, 75/20, H05B33/14, 33/22</b> |   |   |
| Applicant<br><b>NISSAN CHEMICAL INDUSTRIES, LTD.</b>  |   |   |

|    |   |  |
|----|---|--|
| 1. | This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.   |  |
| 2. | This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.   |  |
| 3. | This report is also accompanied by ANNEXES, comprising:<br>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:<br><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).<br><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.<br>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |  |
| 4. | This report contains indications relating to the following items:<br><input checked="" type="checkbox"/> Box No. I Basis of the report<br><input type="checkbox"/> Box No. II Priority<br><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability<br><input type="checkbox"/> Box No. IV Lack of unity of invention<br><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement<br><input type="checkbox"/> Box No. VI Certain documents cited<br><input type="checkbox"/> Box No. VII Certain defects in the international application<br><input type="checkbox"/> Box No. VIII Certain observations on the international application   |  |

|   |                                   |
|---|-----------------------------------|
| Date of submission of the demand        | Date of completion of this report |
| Name and mailing address of the IPEA/JP | Authorized officer                |
| Facsimile No.                           | Telephone No.                     |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016094

Box No. 1 Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016094

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

## 1. Statement

|                               |        |             |     |
|-------------------------------|--------|-------------|-----|
| Novelty (N)                   | Claims | 4, 6, 9-13  | YES |
|                               | Claims | 1-3, 5, 7-8 | NO  |
| Inventive step (IS)           | Claims | 4, 6, 9-13  | YES |
|                               | Claims | 1-3, 5, 7-8 | NO  |
| Industrial applicability (IA) | Claims | 1-13        | YES |
|                               | Claims |             | NO  |

## 2. Citations and explanations (Rule 70.7)

Document 1: US 4983482 A (Xerox Corporation), 8 January 1991

Document 2: WO 03/20790 A2 (Covion Organic Semiconductors GmbH), 13 March 2003

Document 3: JP 2002-40686 A (Canon Inc.), 3 February 2002

Document 4: JP 2001-166519 A (Canon Inc.), 22 June 2001

Claims 1 to 3, 5, 7 and 8

Document 1 (claims; compounds II, III, IV, V, VI, VII, VIII, IX, X, XI and XII in paragraphs 9 to 12; Scheme 1 from paragraph 13 to the bottom of paragraph 14; paragraph 18, line 34 to paragraph 23, line 40 (examples 1 to 11)), document 2 (claims; page 39 "MX-4", page 44 "P24", page 45 "P37, P38, P39, P40") and document 3 (claims, paragraph [0103] "No. 147", paragraphs [0134] and [0135] "examples No. 31 and 32") cited in the international search report indicate that a polymer having fluorene derivatives bonded at the 9<sup>th</sup> position is used as a hole transport layer.

Therefore the invention set forth in claims 1 and 2 lacks novelty and does not involve an inventive step in the light of the inventions set forth in documents 1, 2 and 3, and the invention set forth in claim 3 lacks

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016094

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

novelty and does not involve an inventive step in the light of the invention set forth in document 1.

Document 4 (claims; paragraph [0133] "No. 266", paragraphs [0217] to [0225], [0241], particularly "example 10") indicates that a charge-transporting material is combined with a hole-transporting polymer having fluorene derivatives bonded at the 9<sup>th</sup> position, and the compound thus obtained is applied to form a thin film.

Therefore the inventions set forth in claims 1, 2, 5, 7 and 8 lack novelty and do not involve an inventive step in the light of the invention set forth in document 4.